



AF 2814
PATENT
Atty. Dkt. AMAT/1931/ISM/COPPER/SB

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Chen et al.

Serial No.: 08/856,116

Filed: May 14, 1997

For: Reliability Barrier Integration
For CU Application

§
§
§
§
§
§
§
§
§

Group Art Unit: 2814

Examiner: Bernard Souw

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
I hereby certify that this correspondence is being deposited on August 25, 2000, with the U. S. Postal Service as First Class Mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231.	
8/25/00 Date	<i>Kevin R. Souw</i> Signature

RESPONSE TO FINAL OFFICE ACTION DATED JUNE 29, 2000

In response to the Final Office Action dated June 29, 2000, having a shortened statutory period for response set to expire on September 29, 2000, please enter the following amendments and reconsider the claims pending in the application for reasons discussed below.

IN THE CLAIMS:

Please amend the following claims:

1. (Thrice Amended) A method of filling a feature formed in a dielectric layer, comprising:
- a) depositing a generally conformal first barrier layer on a bottom and sidewalls of the feature;
 - b) removing the first barrier layer formed on the bottom of the feature;
 - c) depositing a second barrier layer on [substantially] the bottom of the feature using a [directional] sputtering technique that avoids substantial deposition on the sidewalls of the feature, wherein the second barrier layer comprises a material selected from a group consisting of Ta, TaN, TaSiN, TiSiN, and combinations thereof; and